THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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THE INTERNATIONAL VETERINARY CONGRESS.

Last week we noted the importance of Mr. Woods' letter suggesting the immediate inauguration of a fund towards the expenses of this Congress, and enclosing a subscription. We are glad to say that the suggestion is already being acted upon. A small Committee, with power to add to its number, has been formed to collect subscriptions for the International Veterinary Congress to be held in London in 1914, and the names of its officials will be published in due course. The step is not being taken a moment too soon, for the expense of the Congress is certain to be very great, even if the attendance is no larger than that at the Hague last year—and these International Veterinary Congresses, ever since their inception, have increased at each successive gathering. We shall have other opportunities of referring to the subject; at present we merely emphasise Mr. Woods' words "It is not too much to assume that our good name is bound up with the success of the Congress." The Congress has been held in many European countries, including some small ones, and has hitherto been an invariable success. Its first visit to England must not mark its first failure; and the one method by which every local society and every individual practitioner may help to avert all fear of failure is by giving a steady annual support to the fund just inaugurated.

THE NATIONAL MEETINGS.

The first two days of the "National" gathering—the two business days—were favoured by beautiful weather; and the attendances were good from the start. A note on the dinner will be found elsewhere in our columns, and we defer any account of the other social functions of the re-union until next week; but we may say generally that the "National" meeting of 1910 was one of the most successful ever held. In no direction was its success more marked than in the nature of the scientific discussions, One of these—that on Mr. Cousen's paper—was not proceeded with after it had been opened by Mr. Gray, owing to the absence of the essayist. The others, without exception, were brisk and well sustained throughout. We never remember a meeting of the "National" at which the discussions were quite so excellent, and so uniformly so, as at this.

Two important decisions were made at the first meeting, on Wednesday morning, and in both the members followed the advice of their Council. The first was the locality of the next meeting, and next year we shall meet in North Wales under the presidency of Mr. Woods, of Wigan—the district is an attractive one, and the excellence of the presidential appointment will be endorsed by all. The second was upon the proposed scheme for reconstitution of the "National" into a union with the other Societies. Briefly, the decision is this. The "National" is unable to accept the scheme as it stands, but is in full sympathy with the desire for union, and proposes to lend its aid towards surmounting the practical difficulties. A Committee has therefore been formed, including, of course, the two pioneers of the present movement, Dr. O. C. Bradley and Mr. Gofton, to consider the problem further and report in due course. This is, we think, the best thing that could have happened. The scheme just rejected was certainly not unobjectionable, and its reference to a further Committee, who will profit by all the knowledge and experience of the various difficulties that the earlier Committee has gained, may result in the production of a workable scheme. Further, the decision shows that the "National" members recognise that union of the Societies is far too desirable a project to be allowed to drop until every possible effort to effect it has been made.

RADIAL PARALYSIS IN A FOAL.

By E. WALLIS HOARE, F.R.C.V.S.

History.—The subject, a valuable thoroughbred foal, was found lying in the field on May 31st. On being made to rise, the attendant found that the off fore leg could not bear any weight, and the point of the toe was dragged on the ground during walking. Marked flexion of the fetlock was present, and when the animal moved quickly the foot was slightly elevated from the ground. At times the front of the fetlock would come close to the ground. The treatment adopted was to leave the animal on grass with its dam, the latter was kept by an attendant from moving about too quickly. A simple liniment was prescribed, to be rubbed in slightly; this of course was as a placebo. Too much rubbing was carried out, hence the mark seen in the brachial region.

No improvement was observed until June 15th, when the animal was found to be able to stand at times. A bandage was kept on the sound limb for the purpose of support. The animal got up and lay down with little difficulty. The two photos were taken on June 15.

On July 6th I found the animal perfectly recovered, no wasting of the muscles was present.

Diagnosis.—Probably fracture of the first rib. Cause not known.

TUMOUR (COLLOID CANCER).

Being of opinion that the following case ought to be recorded, I quote the undermentioned facts;

On the 11th inst. I received from Mr. Harris, the popular manager of Messrs. Bartrum's, bone mills, Ash, Surrey, a memorandum inviting me to inspect an extraordinary specimen of a tumour revealed on post-mortem examination of a cob, consigned to the well known firm (established in 1869). I visited the establishment and there inspected an enormous tumour, turning the scale at 172lb. Having ascertained the name of the owner, Mr. T. Butler, farmer, Lower Froyle, Hants, I placed myself in correspondence with him, and he kindly furnished me with the following answers to my questions *re* antecedents of the case.

"Colour, brown; sex, mare; aged 15 years; height 15 hands. Have owned mare three years, she had been gradually getting weaker for about twelve months, which was attributed to "broken wind." For a few days before death she had dropsical swelling. The mare was used in a trap, occasionally light farm work, and had been ridden a little, but not for two years, she had been quite unfit for work for several weeks, getting very thin, off her feed and swelling about the breast, legs, etc. no veterinary surgeon had treated her. I bought the mare at a farm sale about three years ago, she had for some eight years previously been used for riding and driving. She bred a colt five years ago."

The tumour was somewhat oblong in shape, being 6 feet round length way, 4½ feet in girth, and moderately smooth on surface. The well known Peter Robinson, who has opened at the establishment innumerable horses of the military, and horses and cattle belonging to civilians for the last 41 years, informs me that he has never during his continuous duties at the bone mills seen a case of tumour in a horse assuming the above weight and dimensions. He also says that the tumour was pedunculated and attached *only* to the internal aspect of the wall of the off flank.

I carefully examined a specimen of the tumour microscopically, and am of opinion it was of colloid-cancerous nature.

SEAWARD LONGHURST, F.R.C.V.S., Lieut.-Col.
Ash Vale, Surrey.

BACELLI'S TREATMENT OF TETANUS.

A horse was admitted to hospital at 7 a.m. on June 22nd suffering from lockjaw. I at once gave him

Castor oil	℥vi.
Ol. lini	℥vi.
Ol. Croton	Min. xxv.

(N.B.—I find that castor oil and linseed oil mixed together have a quicker and better effect than when double the quantity of either is given alone.) He swallowed with difficulty about three-quarters of it.

An injection of one drachm of pure carbolic acid was given at 10 a.m. and continued every two hours for 34 hours.

On the 22nd and 23rd the horse was very bad and would not take any food or water. On the afternoon of the 24th he began to suck up a little water in which was put a little suttoo and linseed. As my six previous cases of tetanus had all died within 48 hours, I hoped this case was going to recover, especially as he now showed signs of improvement.

No injections were given on the 24th and 25th, and the horse continued to improve and sucked up a good lot of water, suttoo and linseed.

On the 26th two injections were given.
27th.—Four injections were given.
28th.—Six " " "
29th.—Six " " "

On the 28th and 29th a lot of dark saliva was passed from the mouth. The horse continued to suck up the same diet all this time, but at 10 p.m. on the 29th he got very distressed, and died in great agony about midnight. He was kept in a dark loose box all the time, and received all together four ounces three drachms of pure carbolic acid.

POST-MORTEM.

1. Strong smell of carbolic acid on opening the carcase.
2. Blood very dark coloured.
3. Urine nearly black.
4. Kidneys very congested.
5. Bladder inflamed.
6. Lungs very congested.
7. The pericardial sac contained a lot of blood-stained liquid.

As the post-mortem suggests carbolic acid poisoning, I propose to give injections for only 36 hours to my next case.

G. REES-MOGG, Lt. A.V.C.
Station Veterinary Hospital No. 2,
Meerut, India.

EXTENSIVE WOUND TO CHEEK AND JAW.

By HENRY B. EVE, M.R.C.V.S., Folkestone.

History.—A bay gelding, about nine years old, 15 hands, the property of the Folkestone Theatre Company Syndicate. The animal had been purchased by them for the purpose of pulling the lawn mowing machine in the pleasure gardens, tennis grounds, and had been at work the day previous. It was all right overnight when fed by the attendant, but early next morning found by him cast in the stable showing an extensive wound on the right side of the cheek and under surface of the jaw, with a huge piece of skin hanging down about 1ft. by 9in., and the halter slip broken, and the off-hind shoe partly torn off.

In addition to the presence of the wound the horse showed signs of being affected with parasitic mange, which was obviously of old standing, and which was, I conclude, the cause of the accident. It had been treated for the skin disease, judging from the external appearance of the skin, but ineffectually.

Treatment.—When called in to attend there was little chance of saving much skin, or securing

primary adhesion, owing to the skin having become quite cold. Nevertheless with a view of trying to save some of the pendant cuticle, the skin and exposed surface were cleansed antiseptically, and iodoform tape sutures put in along the edges of the jaws, and up the side of the cheek. The sutures and edges of the wound were powdered with boracic acid and iodoform and a dose of physic given, and iodoform gauze, cotton wool and a many tailed bandage applied over the injury.

Next day the wound was dressed and syringed, and the following day, not much adhesion, except at the inferior edge of the wound, having taken place, about 10in. of skin was cut off and only two or three sutures were left in. The raw surface was then dressed with chinosol by means of a garden syringe, and dusted over with boracic acid and iodoform. A piece of lint was placed over the wound, and secured in position by a bandage, and specially made canvas hood. The dressing was renewed daily for three weeks, and the wound then left uncovered and dressed with tannoform and boric acid, and animal turned away to grass. The wound healed in forty-six days, leaving only a dry patch about 6in. by 4in. The mange was also treated simultaneously and disappeared, and the horse is now working apparently none the worse.

Remarks.—The case seems worth recording on account of the nature and cause of the accident.

REMARKS ON PREUMONIA IN THE HORSE.

By E. Wallis Hoare, F.R.C.V.S.

If we attempt to obtain definite information on the subject of equine pneumonia by studying the views and opinion of authorities in text-books and journals, we find this task an impossible one.

Considering the frequency of the disease in the horse, one would imagine that its etiology and pathology should ere now have been investigated, and some definite knowledge of the subject obtained. We find, however, that the views held by various authorities are of the most diverse character with reference to certain points.

In all the current text-books there is a concensus of opinion as to the existence of certain forms or types of pneumonia. All recognise "contagious pneumonia," more correctly termed "epizootic pleuro-pneumonia of the horse," as every form of pneumonia must be regarded as contagious, the term contagious pneumonia is hardly applicable. This pneumonia is described as possessing special characteristics, especially as regards the lesions, the most striking being the tendency towards necrosis and gangrene of areas of the pulmonary tissue. The type of pneumonia that is present, however, is a point on which authorities are not agreed.

Thus, Friedberger and Fröhner state that it may be either a *lobular* or a *lobar* pneumonia, the former being most common and most serious, the latter being of a mild character with no tendency to gangrene or pleuritis.

Law describes the pneumonia as being of the *lobular* type.

Williams regards it as the *lobar* type, "a croupous inflammation of the pleura and substance of the lungs."

Malkmus defines the disease as "a contagious fibrinous inflammation of the lungs of the horse with implication of the body parenchyma and generally accompanied by secondary pleurisy." He also states that there are variations in the lesions, and distinguishes *mild* cases, in which "the liquid exudate contains little fibrin-forming substance, so that only flabby hepatization, or even none at all, takes place (catarrhal form of the disease).

Also severe cases in which hæmorrhagic necrosis occurs, and death results either from a toxic effect exerted throughout the whole body, or from suppuration or gangrene of the lungs. In typical cases he describes the lesions as an "extensive lobar croupous pneumonia developed especially in the under parts of the lungs." Moreover, he states that "hæmorrhagic necrosis is not of constant occurrence in this disease."

It will thus be seen that even the lesions in so-called contagious pneumonia cannot be regarded as definite.

As regards the bacteriology of the affection, we can only quote the opinion of Malkmus, viz., "It has not yet been proved beyond doubt what is the actual cause of contagious equine pneumonia, for, in spite of much care, bacteriological investigation in this direction has hitherto completely failed."

So much for contagious pneumonia.

All text-books recognise the existence of "sporadic" pneumonia and describe various forms of it. Lobar or croupous is regarded by Friedberger and Fröhner as the commonest type of genuine primary or sporadic pneumonia of the horse.

The classical stages of the disease, similar to those occurring in the croupous pneumonia of man, are described by all veterinary authors, viz., engorgement, red hepatization, grey hepatization and resolution.

Sir John M'Fadyean (*Journal of Comparative Pathology*, vol. 8, p. 77), has never met with typical red hepatization in the pneumonia of the horse. In the lobar pneumonia of the horse the hepatized lung is not uniform in texture, but comprises a number of different centres . . . . With the microscope it is found that even over small areas the pattern of the structural alteration is not the same throughout. At some places the air cells are densely crowded with leucocytes unmixed with either red corpuscles or fibrin threads, and at others they are occupied by fibrinous coagulate or by actual blood."

This description is in striking contrast to that of the lesions of croupous pneumonia given in text-books, yet it has never been proved to be incorrect, and coming from so high an authority one is bound to give it serious consideration.

The existence of a sporadic or primary form of pneumonia in the horse is indeed doubted by some, and, judging from the descriptions given of the lesions of acute pneumonia in papers read for discussion from time to time, one would be led to

believe that only one form of pneumonia existed in the horse.

The clinician, however, is hardly likely to accept this view, as he is well aware that isolated cases of pneumonia occur in country districts, the clinical course of which differs from that of epizootic pneumonia. Generally speaking, this clinical course coincides with that given in text-books as accompanying sporadic or croupous pneumonia.

It may be said that such cases are in reality, but instances of the mild type of contagious pneumonia. No doubt we would be lacking in our duty to both patient and client were we to omit the precaution of isolating such a case. But we cannot accept the view that a tendency to necrosis and gangrene is present in acute pneumonia of the horse, unless the type be that of epizootic pneumonia.

Having had a fairly large experience with pneumonia under a variety of conditions both in town and country, we have seen a large number of fatal cases in which neither the clinical history nor the autopsy showed any evidences of the presence of necrosis in gangrene. The usual cause of death was a combination of over-distention of the right heart, asphyxia, and toxæmia.

Even in many extensive outbreaks in some years we did not meet with a single case of pulmonary gangrene. No doubt a common cause of this condition is careless drenching, also ill-ventilated and unsanitary surroundings. In other years a series of cases characterised by the occurrence of pulmonary gangrene would occur.

No doubt, in the routine of daily practice many cases of sporadic pneumonia are diagnosed as influenza complicated with pneumonia. "Influenza" covers a multitude of evils and is a convenient diagnosis. But really the fine points of distinction laid down for the differential diagnosis of sporadic pneumonia, epizootic pneumonia, the pneumonia of influenza, the pneumonia of strangles, etc., are more suited to fill the pages of text-books than to prove of value in actual practice.

For example, one text-book tells us "General croupous pneumonia is distinguished from contagious pneumonia chiefly by its non-contagiousness." Again, we should of course "exclude pneumonia due to chill, foreign bodies, metastasis etc. in the diagnosis of contagious pneumonia."

We may as well honestly confess that the differential diagnosis of the various forms of pneumonia is attended with an enormous amount of difficulty, and that very little definite knowledge exists on the subject. The clinician who has experience of both town and country practice is not likely to accept the view that there is only one pneumonia in the horse, divided into *benign* and violent types.

We cannot overlook the fact that as all the benign or mild types, and also a large proportion of cases that would not be thus described, recover, definite information as to the lesions present in such cannot be given. The cases that prove fatal furnish the advanced lesions, and are those available for the pathologist.

As regards the abortive, larval or anomalous types of pneumonia, we know nothing definite as to the pathology, but it is extremely doubtful if such should be classed as pneumonia.

With reference to catarrhal or broncho-pneumonia, attempts are made to differentiate this condition from capillary bronchitis. Obviously this is impossible to carry out, and the plan adopted in some text-books of human medicine of describing both under one heading is a rational and commonsense one.

(To be continued.)

ABSTRACTS FROM FOREIGN JOURNALS.

The Symptoms of Rabies in Ruminants.

Bissauge (*Revue de Pathologoie Comparée*) analyses the symptoms of bovine rabies described by various observers, and gives a *resumé* of the descriptions scattered throughout veterinary publications. He gives the following description of the symytoms in large and small ruminants.

Large ruminants. As in the dog, a furious and a tranquil form of rabies are recognised in cattle. In bovine "dumb rabies," the animal at first simply appears subject to a strange and apparently motionless restlessnes. He carries his head high, and the eyes show an unaccustomed glitter owing to dilatation of the pupils. The animal also is subject to transient moments of hallucination, in which he butts and kicks against an imaginary enemy. These attacks are generally very short; and often pass unperceived.

Digestive disturbances appear early in the course of the disease. At first the appetite is capricious, and afterwards it is totally lost; rumination ceases, and symptoms of acute pharyngitis appear. Deglutition is first difficult, then impossible, and there is frothy salivation. No dread of water is present, and depraved appetite is only observed in exceptional cases.

The old test of showing a dog to the bovine suspected of rabies is far faom being as valuable as has been supposed. All cows, rabid or not, are accustomed to defend themselves more or less vigorously on the approach of a dog.

One quite special symptom is the early appearance of an intense and continual rectal tenesmus. The point of inoculation is sometimes the seat of pruritis. In both sexes, sexual excitement is very marked. At first, a somewhat marked lameness is often observed; and always, after 24 or 48 hours at most, a weakness of the hind-quarters appears. The animal moves with difficulty; progression is vacillating; rising becomes more and more difficult and then impossible; the strength becomes exhausted by degrees, the paralysis progresses, and death supervenes in collapse.

Furious bovine rabies presents more accentuated symptoms. The irritation is greater, and the aggressive manifestations are more violent and more frequent. There is continual bellowing, which is

provoked by sound, by light, and especially by the human voice. The agitation is of long duration; the animal paws the ground furiously, and sometimes bites his cord or chain of attachment and the bars of his rack. A rabid bovine, however, does not attempt to bite men or other animals, but attacks them with his natural weapons, viz,, the horns.

All these violent symptoms are intermittent.

Small ruminants. In these, the symptoms of rabies are almost the same as in cattle. At first, the animals snort frequently, grind their teeth, and are restless; afterwards they become excesively excited, running in all directions with their heads elevated in the air. The dilatation of the pupils seen in oxen is also present in the smaller ruminants, and transforms their usually placid expression into a wild one. The hallucinations, and aggressive attitudes towards imaginary enemies, appear early in the course of the disesse. These paroxysms are succeeded by calm moments, during which the sheep remains immobile; the head is then inclined downwards towards the ground, as if the animal were in a kind of coma. The rabid sheep has a much greater tendency than the ox to use its teeth to attack men, animals, or even inanimate objects which it is able to seize. The bitten part is the seat of an intense pruritis, which impels the sheep to lick itself and even to bite itself furiously without apparent pain. Death supervenes in four or five days at most from general paralysis,—*Annales de Měd. Vět.*

Traumatic Splenitis in a Cow.

Disease of the spleen is difficult to diagnose during life in the domestic animals, on account of the anatomical situation of the organ. In the horse, certainly, it may be diagnosed by rectal exploration; but in the ox the spleen cannot be reached per rectum. At most, in suitable cases, enlargement of the spleen may be diagnosed by percussion. Moreover, disease of the spleen in most cases does not arise independently, but appears as a secondary affection, and if its diagnosis during life is possible treatment is generally useless.

After making the above preliminary observations, Albert Beregi records (*Allatorvosi Lapok*) a case of a cow, 4½ years old, which had eaten badly and shown difficulty in moving for some days. Nothing abnormal could be recognised in the thoracic organs. The movement of the rumen was sluggish, and the xiphoid region was somewhat sensitive. The author prescribed purgatives, and Priessnitz compresses to the abdominal wall; and this treatment was followed by some improvement, as the appetite and rumination, and the movements of the rumen and intestine became satisfactory.

Two months later, however, the author again examined the cow and found that the tenderness of the xiphoid region had extended upwards, and that when the animal laid down every movement was accompanied by great pain. The author diagnosed the probable presence of a foreign body in one of the anterior stomachs, and had the cow slaughtered.

Post-mortem, the reticulum was found to contain a piece of wire, ten inches long and one-twelfth of an inch thick, which had penetrated through the wall of the reticulum into the spleen. The spleen was enlarged to four times its normal size, and its capsule was opaque, thickened, and covered with fibrinous exudate. Its lower half was transformed into an abscess cavity which was distended with foul smelling, viscid pus, scarcely any splenic tissue remaining. No lesion worthy of mention was found in the other organs.

The peculiar feature of the case is that, despite the serious nature of the lesion, the cow showed no symptoms of illness beyond the local tenderness and difficulty of movement, but maintained her appetite and ruminated until she was slaughtered. —*Berliner Tier. Woch.*

Glanders—Human Infection by Ingestion.

Szabó records (*Allatorvosi Lapok*) a case of a peasant's son, who was recognised as suffering from glanders in a hospital. Szabó was acquainted with this by the medical man in charge, and therefore visited the peasant's premises, where he found a horse presenting symptoms which were suspicious of glanders. This horse afterwards gave a typical reaction to the mallein test, and the diagnosis of glanders was confirmed by post-mortem examination. This young peasant had been in the habit, after giving the horses water, of himself drinking from the same bucket; and his infection could be attributed to this cause with the highest degree of probability. At first his illness was mistaken for typhoid fever; and glanders was diagnosed later at the hospital.—*Berliner Tier. Woch.*

Royal College of Veterinary Surgeons.

EXAMINATIONS IN DUBLIN.

At the meeting of the Board of Examiners held in Dublin on July 8th for the written, and on and between July 14th and 19th inclusive for the Oral and Practical examinations, the following gentlemen passed their Final Examination:

Mr. E. L. Porter	Mr. W. Nyhan
F. T. Smyth	R. H. C. Higgins
F. B. Hayes	R. O'Donnell
T. R. Hunt	J. F. O'Grady
A. C. Kirkpatrick	F. J. Sheedy
P. McDonnell	

The following passed their Third Examination:

Mr. Desmond English *	Mr. H. W. Carbury
T. F. O'Brien *	P. F. Dolan
C. Roche	E. W. Little
T. L. Shea	A. S. Mathias
T. Gordon	N. D. Vakel

The following passed their Second Examination:

Mr. M. McClancy	Mr. H. E. A. L. Irwin
J. J. O'Neill	T. McD. Kelly *
D. J. O'Byrne	J. Quinlan †
F. B. Sneyd	T. O'Leary
J. J. Cosgrove	

The following passed their First Examination:

Mr. T. Reddin	Mr. St. J. C. P. McFarlan
T. G. Browne	J. J. Mills
T. D. Condell	J. P. McNally *
J. R. Ellison	J. J. Pomeroy
D. E. Greene *	A. P. Preston
M. P. Hatch	C. M. Stewart *
J. J. Hegarty	M. Toomey

Marked thus † passed with First Class Honours.
" * " Second " "

TUBERCLE BACILLI IN THE FÆCES IN TUBERCULOSIS.

By R. W. PHILIP, M.A., M.D., F.R.C.P.E., and AGNES ELLEN PORTER, M.D., D.P.H., Research Scholar, Royal Victoria Hospital for Consumption, Edinburgh.

It has been commonly supposed and taught that the discovery of the tubercle bacillus in the stools is diagnostic of tuberculous enteritis. Until recently it had hardly been conceived that the tubercle bacillus might be found in the fæces of persons suffering from other forms of tuberculosis. The observations which follow show how frequently they occur in the fæces of patients affected with pulmonary tuberculosis. Their occurrence in the stools would indeed seem to be much more constant than in the expectorations.

It may be recalled that last year Rosenberger (*Amer. Journ. of Med. Sci.*, Feb., 1909), described the presence of tubercle bacilli in the blood in different forms of tuberculosis. More recently Willson and Rosenberger *Journ. of Amer. Med. Assoc.* 52, 1909, No. 6) announced that they had found tubercle bacilli in the stools of 100 tuberculous patients, including early cases, and in 21·5 per cent. of 1033 clinically normal persons. According to these observers, the bacilli obtain access to the blood stream and are carried from the affected focus to the intestinal wall, through which they are excreted, and so are finally discharged in the stools. Klose (*Muench. Med. Woch.*, Jan. 14, 1910) has likewise found that in almost every case where tubercle bacilli were found in the expectoration they were also found in the fæces.

The significance of the constant discharge of tubercle bacilli from the alimentary tract is immense, both from the point of view of clinical medicine and of public health. On this account it seemed to us desirable to make further observations on the subject, and these are now recorded.

Uhlenhuth and Xylander (*Berl. klin. Woch*, 1908, No. 29) have recommended the use of "antiformin," a mixture of alkali hypochlorite and alkali hydrate, for the purpose of distinguishing acid-fast from other bacteria in sputum. Acid-fast bacteria can resist this disinfectant when diluted to 20 per cent. for two to five hours, while other bacteria and organic matter generally are speedily dissolved. Uhlenhuth mixed sputum with antiformin in sterile Petri dishes. We used instead conical precipitating glasses. A small piece of fæces, about a cubic ½in. in size, is placed in a conical glass, and to this some 20 c.cm. of antiformin, which has been diluted with water to 15 per cent., is added. The fæcal matter is well broken up and mixed with the fluid, and thereafter as much again of the dilute antiformin solution is added. This is further mixed, and allowed to stand for about an hour. A white curdy precipitate appears on mixing, and in the course of an hour settles into a white layer which varies in breadth. Beneath the white layer some unchanged fæcal matter remains, and above the white layer the fluid is of a clear yellow or brownish colour. A residue, including tubercle bacilli, which have been set free by the destruction of the other constituents of the fæces, appears to be gathered into the white layer by a process of sedimentation. During the precipitation and sedimentation of the organic matter the bacteria are carried down, perhaps in some degree agglutinated. This concentration of the organisms makes up for the disadvantage caused by the initial dilution of the material.

For mieroscopic examination a drop is then taken from the white curdy layer by means of a pipette and placed at the end of a slide, along with a drop of albuminous water from a mixture containing 1 part of egg albumen to 10 of distilled water and 1 per cent. of formalin, and 90 per cent. of distilled water is added. A film is made in the usual way by drawing out the fluid with a second slide along the surface of the first. The albumen, which is recommended by Seeman (*Berl. Klin. Woch.*, 1909, No. 14), helps to produce a better film and prevents the film from being washed off.

As to the strength of antiformin to be used, we have found that 15 to 20 per cent. is most suitable. The use of a stronger solution, say 50 per cent., is apt to lead to separation of the film. The time during which the action of the antiformin may be continued does not require very strict limitation ; although Seeman says that the bacilli cannot stand its action for twelve hours, we have not been able to determine any deterioration of staining properties of the bacilli after twenty-four hours' action when use is made of the 15 to 20 per cent. dilution. The action of the antiformin seems to be chiefly exerted during the first hour, so that there seems no reason to continue the process for more than that time. Indeed, if the white layer has formed well within half-an-hour, the film may be prepared then. Even when the curdy layer does not become quite white, but remains of brownish tint and small in amount, our experience is that little is to be gained by waiting longer than an hour. The excess of brownish colouration is commonly dependent on an excess of fæcal matter, or, perhaps, on the presence of iron taken as medicine. The prepared slides are fixed by heat and stained in the usual way by carbol-fuchsin and methylene blue, being decolourized with both acid and alcohol. As the tubercle bacilli are commonly sparse, it is advisable to prepare two or three films from each specimen.

Microscopically the film is found to consist entirely of a blue-stained residue. Here and there tubercle bacilli are conspicuous by their reddish colour. In most instances they require much searching, as their total number is small. Only in two of the considerable series of specimens examined by us could they be said to be abundantly present.

Some doubt might be suggested as to the identity of the bacilli. Willson and Rosenberger were able to distinguish the bacilli in the stools examined by them by means of prolonged exposure to Pappenheim's stain. Other acid-fast bacteria, with the exception of the bacillus of Johne's disease, lost their carbol-fuchsin stain in twenty minutes. Tubercle bacilli retained it for one hundred and sixteen days.

Our slides were decolourized with alcohol as well as acid. Bacilli were not present in the fæces from the normal cases examined. The bacilli in both sputum and fæces possessed the same characters. One case with short, thick bacilli in the sputum had short, thick bacilli in the fæces.

We attempted to make cultures from the fæces, but a large number of resistant spores occur in fæces, and we were unable to destroy them without also destroying the tubercle. While it is possible to obtain pure cnltures of the tubercle bacillus from sputum, fæces present greater difficulties, and so far our attempts have proved unsuccessful.

The results obtained by us may be summarized as follows. Altogether 109 different specimens were examined. Of these, 99 were from patients suffering from

pulmonary tuberculosis, in different stages of the disease' in the Royal Victoria Hospital for Consumption. None of the patients had intestinal tuberculosis. The others were from patients in the Royal Infirmary, one from a case of tuberculous peritonitis, and the others from patients without a suspicion of tuberculous infection.

Of the 109 persons, only 34 had sputum in which tubercle bacilli had been discovered ; 42 had sputum in which no bacilli were found, and 24 had no sputum whatever.

Of the 100 tuberculous cases examined 79 were found to yield tubercle bacilli, and only 21 were negative. Of the 9 specimens from presumably normal subjects none yielded tubercle bacilli.

Of the tuberculous patients, all those with bacilli in their expectoration, with one exception, presented tubercle bacilli in the fæces. Of the 42 cases in which bacillary examination of the sputum was negative, 29 gave tubercle bacilli in the fæces. Of the 24 cases without sputum 17 showed bacilli in the stools.

These results are striking, and are suggestive in regard to clinical diagnosis, and to the larger aspect of preventive medicine. Thus it may be stated with absolute certainty that the occurrence of tubercle bacilli in the fæces is independent of the presence of an intestinal lesion. Indeed, their presence has little reference to abdominal tuberculosis. They were actually absent from the only case of tuberculous peritonitis which was examined.

The remarkable frequency of their occurrence in relation to pulmonary tuberculosis, not only in cases where tubercle bacilli were determinable in the sputum, but also in cases where either bacilli were absent or there was no sputum whatever, would seem to afford an important addition to our means of diagnosis in doubtful cases of pulmonary tuberculosis.

From the Public Health point of view, the almost unfailing presence of tubercle bacilli in the fæces—the presumption is that in some of the negative cases in the present series more minute examination would have discovered them—raises questions as to the need for disinfection of stools, more especially in the case of bedridden individuals, such as has hitherto not been thought necessary. Further, if, in the Royal Victoria Hospital where swallowing of sputum is carefully guarded against, tubercle bacilli are found to occur so constantly in the stools of the patients, whether expectorating bacilli or not, it may be assumed that in the great proportion of untreated cases, where swallowing is often the rule, the number of tubercle bacilli discharged in the fæces will be vastly greater.

It may be added that the technique necessary for the clininical detection of the bacilli is not difficult or lengthy, and that the process of fæcal examination, which is apt to be repellent to some observers, has most of its unpleasantness removed by the method which has been described.—*The British Medical Journal.*

THE VETERINARY COLLEGE AT BERLIN.

By L. M. Steckel, D.V.M. (O.S.U.)

It was a cold and dreary December morning in 1908 when my eyes first cast sight upon the Royal Veterinary College (Kœnigliche Tieraerztliche Hochschule), Berlin, Germany. The campus and buildings were covered with a layer of grayish white snow, and, save for a uniformed employee here and there, the many winding walks seemed to be deserted. To a stranger who figured this to be a lively place it made a very solemn impression. But this suspense was not to last long. Just as quiet as it was outside, the interior of the many buildings presented an active and busy assemblage of students and professors writing, lecturing, operating, or at the microscopes.

The College buildings are arranged in a somewhat irregular circle. Each building or institute is named after the course of studies pursued therein and is under the supervision of one of the professors who is the head of the respective branch of study, while the rector is the administrative head of the College.

When presenting myself to Professor Schmalz, the rector, he greeted me very cordially and spoke highly of the advanced strides taken by the United States in veterinary science. The other professors, too, complimented me on my coming from the land of limitless opportunities where several of the great discoveries in the veterinary field have been made. They referred especially to "Texas fever" and "hog cholera," which for years have baffled the most noted scientists, and for which discovery we have earned the appreciation of the entire world.

The students were also glad to entertain an American, inviting me to take part in their various College affairs, among which "Die Kneipe," or the gathering in the beer halls, plays an important part. My attendance at the various lectures and clinics afforded me an opportunity of becoming acquainted with the conditions in one of the leading veterinary institutions of the "Fatherland," or perhaps in the world.

One of the interesting centres of attraction for the students of the College is the Pathological Institute, of which Professor Schütz is the predominant figure. His large lecture hall is always filled to the last seat. Besides the regular students there are a number of post-graduates from Germany, Russia, Japan, and the United States, army veterinarians detailed to attend the courses, and many other visitors. All come to hear what the spry, three-score-and-ten, gray-haired professor has to say. For, the only way to learn from this world-famed scientist is to come there and listen to him, as he has not written any book on pathology and does not lecture from any. He prints, so to speak, his work and original investigations on the minds of his hearers right there in the classroom.

A loud shoving of feet (the custom there) is heard. An unassuming man appears on the platform. With a modest nod to the audience and a glance to see that all his necessary coloured crayons are on the table, he commences to talk. His lecture to-day is on diseases of the heart. At first he explains the anatomy of the heart and its normal functions, at the same time not forgetting to give a gentle scolding to the students for not knowing this already, assuming that they don't. Then gradually, but clearly and with oratorical forcefulness, he goes into the details of the disease. Quite often he springs surprises by some of his statements, as, for instance, when he said that everybody believes the heart muscle to be red while in reality it is gray. In his lectures Prof. Schütz continually refers to the original researches and investigations, which he and his assistants are constantly carrying on in the laboratory.

At Professor Fröhner's clinic, the students stand in a sky-lighted clinical hall in a semicircular manner, a horse and a uniformed employee in the centre. On a table near by there stand a beaker of urine, several test tubes with results of blood and urine analyses, and a chart showing the fever curve of the patient. One of the students in a white coat is the referee for the day. He has already the day before examined this horse and is now ready to report his findings. It is a case of contagious pleuro-pneumonia (Brustseuche). The referee gives the history of the case as told by the owner, a description of the patient, the condition of the respiratory, digestive, urinary, nervous, and locomotary apparatus. Professor Fröhner verifies the referee's statements by examining the patient carefully, namely, by percussion

and auscultation and leading the patient about if that is possible. The referee then gives the prognosis and treatment of the disease, with reasons for his statements. After clinic Professor Fröhner makes a round through the stables and acquaints himself with the conditions of the old and new patients and consults with his assistants as the best method of treating them.

We next go over to the busy polyclinic conducted by Professor Kærnbach. Here there are every day about fifty horses brought over from the city and country to be examined for any and all diseases which affect the equine race. To this clinic the seniors are assigned in sections, and, with the aid of the professor and his assistants, are taught to make a diagnosis and recommend treatment. Each student is given one or more cases. He examines the animal carefully, questions the owner as to the time the sickness occurred, what remedies he has already given ; for in many cases the animal has already had a taste of many sweet and sour medicines before coming to the clinic. The student then allows the horse to be led before the professor and is questioned as to his findiugs and the reasons for the same. The professor confirming the diagnosis and the treatment, the horse is taken into the hospital to be attended. Any and all operations not of a serious nature are performed here by the students under the direction of one of the assistants. Other cases are sent to the medical and surgical clinics for operations, or to be under observation in case an infectious disease is suspected.

From here we step over to the busiest as well as the largest place on the campus—the surgical clinic. As in the other departments, the students are divided into sections and assigned to appear at various times for practice in operating. At first the students learn minor operations under the supervision of the assistants, and then they attend the major operations as carried out by Professor Eberlein. In the main operating hall there is an operating table and a throwing mat, the latter to acquaint the students with the most common ready-to-hand method of throwing for an operation in the country. Before proceeding to the operation, Professor Eberlein explains in detail the various methods of operating the particular case in hand, the reasons for the same, the dangers connected with the operation and the sequelæ, or the bad results which might follow. He particularly emphasises the fact that the first requisite for a successful operation is asepsis, and this, coupled with skill, will bring best results. At this department the students are infused with the true idea of veterinary practice, for while there are many fields for the veterinarian's activities, still the paramount issue of a veterinary college is to send out its students as able surgeons.

Another interesting place is the clinical building for the treatment of small animals. This is under the direction of Professor Regenbogen and his two assistants, who, though greatly overtaxed, manage to examine as high as seventy-five animals during the polyclinic hours. Here, as naturally would be expected, the gentle sex is represented in large numbers. They bring their pet animals, dogs, cats and birds, big and little, young and old ones, pedigreed and curs, that the professor may look at their ailments. An employee distributes tickets to these visitors, thus insuring them a "next," and they wait in the reception room until the professor arrives. During the clinic several of the students assist in the examination and treatment ; some sit by the microscopes, while others write out prescriptions and record the cases. Here is some of the routine : A case is brought in ; it is a dog suffering from indigestion. The animal is placed on the table, is examined carefully as to his visible mucous membranes, the pain he evinces on palpation in the region of the stomach and intestines, and with the story of the owner as to his refusal of food and so on, the professor explains to the students the diagnosis and gives a prescription for the case. Then another dog is brought in. This one is scratching himself, declares the owner. The skin is examined and from the reddish spots they scrape a little on one or more slides to be examined microscopically, and treatment is then recommended accordingly. Other cases were, a chicken with diphtheria, a cat run over by an automobile, a canary bird which has suddenly stopped singing, and many injured dogs which had to be bandaged. The cases which are of a more complicated nature are left in the clinic for one or more days to be operated on, or to be under observation or treatment for skin diseases, distemper, or rabies. After the polyclinic hours the professor retires to the operating room, and with the aid of the assistants and students performs some of the necessary operations.

As a fitting change from the animal clinics we next wind our way to the Hygienic Institute, the home of the minute bodies or bacteria. What a change has come in the study of bacteria during the past quarter of a century ! In place of just a room, there is now an entire building dedicated to the study and culture of these organisms. The Hygienic Institute was formerly under the able and well-known Professor Ostertag, the pioneer of "meat inspection," but since the German government has recognised the importance of veterinary science for the welfare of the country, and has called away this scientist to be the director of the veterinary division in the Imperial Health Department, the vacancy was filled by Professor Frosch, a medical man who has done considerable work in the field of bacteriology. The course in this study is given by lectures and laboratory work. In the latter the students are divided into sections and receive, so to speak, "a course," and learn the essentials in the modern study of bacteriology. Professor Frosch and his assistants do a good deal of investigation work, and have also charge of the serum production, which the College does for the State. Besides the regular students, there are older practitioners, army veterinarians and others to whom special courses are given.

In connection with the Hygienic Institute there is a pathological museum which is the best and most complete of its kind. Here we must again extend our appreciation to Dr. Ostertag, for it was he and his assistant, Dr. Stadie, who with tireless efforts made this museum what it is to-day. The laboratories for the study of piroplasmoses, and meat and milk hygiene are also in this building.

The Physiological Institute is under the direction of Professor Abderhalden, a former co-worker in the chemical-physiological laboratory of the famous Emil Fischer. Dr. Abderhalden's lecture hall and laboratories resemble an electro-chemical workshop, as extensive experiments are carried out to illustrate the principles of physiology and physiological chemistry. A great deal of attention is paid to the teaching of physiology of the sense organs.

In the anatomical building there is a fine museum of anatomical specimens which is indeed a credit to this wonderful institution. Among the many interesting things found there is a mounted skeleton of the great charger ridden by Frederick the Great.

The College Library contains a great many volumes of the principal veterinary books, as well as a number of agricultural books of interest to the veterinary students. Each student by signing a card can borrow from the library as many books as he may need for reference or study purposes. There is also a reading room attached to the library for the use of the students and professors.

The College dairy consists of a small select herd of the principal breeds of cattle. It serves as an object lesson for the study of the dairy breeds and to acquaint the students with the modern methods of keeping a sanitary dairy.

A word about the students' sports. There are a number of "corps," or, as we would perhaps call them, "fraternities." These are organisations for the purpose of promoting social friendship among its members. It is in these that the fencing sport is mainly carried out, as each member is required to practice and participate in several fencing contests. Then there is a students' organisation whose aim is to promote good fellowship among all the students and to care for any sick student. The student organisation organises clubs for dancing, skating, tennis, football, horseback riding, theatre and excursion parties. The excursion parties embrace visits to places of interest of every description, as well as pleasure excursions to the country. It may be said here that the German students are more and more turning away from the "Kneipe" and indulge in the more strenuous American and English sports.

The Royal Veterinary College at Berlin, like most of the European Colleges, has the benefit of age. It is old in traditions and has withstood the test of time. It has had men, great men, whose ambition in life it was to improve the College, and these men devoted their lives to the betterment of the study of veterinary medicine and to place it on an equal footing with the other learned professions. This College has as its leaders men who, like their predecessors, are a credit not only to the profession, but to the whole German nation, and the men who go forth from here can not fail but become leaders in the various lines of veterinary medicine.—*American Veterinary Review.*

Malta Fever and Goats' Milk.

When Sir David Bruce and his colleagues on the Malta Fever Commission reported that the disease was spread in Malta mainly by goats' milk, and that the boiling of that fluid before use was sufficient to prevent the infection, there was not wanting some persons in this country and in Malta who scoffed at so simple a solution of what had hitherto been considered an obscure problem. But the adoption of this precaution in the barracks and hospitals of Malta has resulted, as is now well known, in an almost complete disappearance of the disease from the naval and military garrison of the island, in this way clearly demonstrating the correctness of the conclusions arrived at by the Commission. It has been quite recently announced in Parliament that the inquiry is to be carried a step further by the appointing of a fresh Commission to investigate the manner in which goats become infected by the micrococcus melitensis. In this connection it is of interest to remark that reports from various sources tend to prove that Malta fever has a much wider distribution than was formerly believed; and lately accounts received from France show that the disease has appeared at a number of places in that country, particularly in the departments of Var, Bouches-du-Rhône, Hérault, and Gard. It has been suggested that these recent outbreaks in France are probably associated with the importation of Maltese goats through Marseilles, where an agency for the purpose is established, the goats from Malta being especially sought after on account of their superior milk giving qualities. An account of a recent epidemic of this kind, involving both man and goat, is given in the current number of the *Annales de l'Institut Pasteur*, the investigation having been carried out with the assistance of a subvention from that institution. The scene of the outbreak was a sparsely populated and remote district situated on the outlying spurs of the Cevennes, inhabited by agriculturists of the poor peasant class living in isolated cottages or small farms, each family keeping one goat or more to supply them with milk. No cows or horses were kept, the only other animals raised by the peasants being pigs, poultry, and rabbits, though some of the better off people keep a few sheep. In this remote region an epizootic appeared in December, 1908, among the goats, of which, it was ascertained during the inquiry, 164 had suffered; of these no fewer than 63 aborted. In January a sudden and severe outbreak of illness, diagnosed at first as "infectious influenza," attacked the peasants, of whom some 179 suffered. It was remarked that the epizootic of the goats and the epidemic in man were both limited to a well-defined area comprising three parishes somewhat shut off by the physical characters of the country from the adjacent communes. Owing to the protracted nature of the illness, in some instances lasting several months, suspicion was aroused that the prevalent malady might be Malta fever. As a preliminary measure specimens of the blood of five convalescent patients were sent to an expert for examination, and he reported that the serum in four instances agglutinated the micrococcus melitensis in dilutions of 1 in 20 and 1 in 60. The main investigations were made more than nine months after the occurrence of the outbreak, but it was found that in 75 out of 80 cases in which the agglutination test was tried, a positive result was obtained. A modification of the agglutination test was employed for the goats' blood, and of the 63 goats which had aborted during the period in which the epizootic prevailed it was found that 71 per cent. gave positive results. The blood also of 96 rabbits was tested, and in 20 of them agglutination occurred. The goats and rabbits, it may be mentioned, were housed in the same sheds under extremely filthy conditions. In the districts surrounding the infected zone no similar illness in man or animals had been observed, and none of the goats had aborted. The houses where the goats were kept in the three communes which suffered from the illness were scattered, singly or in small groups, over a somewhat wide and hilly area, and had few conditions common to them all. But in August and September 146 goats out of 164 attacked had been taken to a particular farm within the affected area to be covered by a buck goat kept there. Although the precise manner in which the farm came to act as a focus of the infection has not been ascertained, it is surmised that a recently purchased goat from a distance had been brought to the farm and had set the mischief agoing. The investigators of the outbreak were satisfied that the disease which attacked the goats in December was Malta fever and was the same as that from which the peasants and their families suffered in January, and that the infection was conveyed to man by means of the goats' milk. With a view to prevent such occurrences it is recommended that traffic in Maltese goats should be strictly controlled at Marseilles, so as to secure that no infected animal will be permitted to enter France. It is also suggested that a series of investigations should be undertaken to discover how long the micrococcus melitensis can survive in the cheese which is made from goats' milk, and which may possibly be a cause of the spread of the disease.—*The Lancet.*

The Removal of Plaster Appliances.

A simple and very practical method of rapidly removing splints, bandages, and other apparatus made of plaster of Paris is described by Max Stransky in the *Medizinische Klinik*. A cotton-wool swab is soaked in vinegar, and is then applied to the plaster surface along the line where it is proposed to divide the apparatus. After waiting a couple of minutes the surgeon is able, without the slighest difficulty and without causing the patient any pain, to divide the apparatus along the line softened by the vinegar with an ordinary pocket knife. The author has employed his method for the past twenty years with the greatest success. He has been able by it to remove in a minute and a half a plaster thigh-bandage consisting of 80 turns.

DISEASES OF ANIMALS ACTS 1894 TO 1903, SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Counties Affected	Sheep Scab.	Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Animals Attacked	Out-breaks	Out-breaks.	Slaugh-tered *
GT. BRITAIN. Week ended July 23	16	24	1	14	9	40		4	27	359
Corresponding week in 1909 ...	23	31			11	32	Essex 5	2	41	345
Corresponding week in 1908 ...	25	27			23	46		4	35	318
Corresponding week in 1907 ...	22	25			18	24	London 6	...	61	304
Total for 30 weeks, 1910	887	1073	1	14	214	637	Monm'th 29	326	884	8014
Corresponding period in 1909 ...	807	1080			338	1276		463	1098	9732
Corresponding period in 1908 ...	680	917	3	112	490	1526		653	1345	7219
Corresponding period in 1907 ...	673	887			540	1278		406	1559	7230

Board of Agriculture and Fisheries, July 26, 1910.

	Parasitic Mange (outbreaks)									
IRELAND. Week ended July 16	...	...	...	...	...	...	3	4	...	11
Corresponding Week in 1909 ...	...	...	...	...	...	...	3	4	5	206
Corresponding Week in 1908 ...	1	1	...	...	...	...	1	...	3	282
Corresponding Week in 1907 ...	...	...	...	...	1	1	...	1	3	24
Total for 29 weeks, 1910 ...	5	8	...	...	1	2	43	338	62	1543
Corresponding period in 1909 ...	3	3	...	...	...	...	59	302	73	1299
Corresponding period in 1908 ...	5	8	...	...	...	...	26	270	123	2574
Corresponding period in 1907 ...	1	2	...	...	3	3	55	185	74	1246

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, July 26, 1910

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

The Organism of Bovine Pleuro-pneumonia.

Bordet (*Ann. de l'Inst. Pasteur*, March, 1910) describes the morphology of the microbe which causes pleuro-pneumonia in cattle. It was shown by Nocard and Roux that this minute organism could be cultivated in collodion sacs introduced into the peritoneal cavity of rabbits; but hitherto, Bordet points out, microscopic preparations of the virus have revealed nothing more than minute granules without any very definite characteristics. He finds, however, that the microbe assumes quite a different aspect when grown on media rich in rabbit's blood. He has employed for his cultures blood agar, containing potato extract and glycerine, which he prepared according to the formula recommended by himself and Gengou for the culture of the microbe of whooping-cough. The surface of this medium was inoculated with a culture grown in bovine bouillon-serum, which he received from M. Dujardin-Beaumetz. After one or two days' incubation a darkish streak appeared along the line of inoculation, but no definite layer of bacteria was visible. Films were prepared, fixed in absolute alcohol, and stained by Giemsa's method. On microspic examination the microbe was found as a fine filament presenting sometimes a single curve and sometimes undulations, S forms, and even spirals. There also occurred rounded, granular forms, the centre of which generally were faintly stained. Discussing the question whether the organism should be regarded as a vibrio or a spirochæte, the author remarks that as contrasted with spirochætes, such as the syphilitic spirochæte, the organism is not of uniform thickness, is not regular in shape, and has not a very sharply defined outline. Swellings are frequently observed in some part of the filament, and the extremities are often very slender and thread-like. The staining is not uniform, and there is much variety in size and shape, the average length being much less than that of the syphilitic spirochæte. He has also obtained filamentous forms by subculture in bouillon-serum. As the cultures become older there is a transformation into granular forms, a change which is very similar to what takes place with cholera cultures.—*B. M. J.*

Foot-and-Mouth Disease in Yorkshire.

The Board of Agriculture and Fisheries issued the following statement on Friday night, 22nd inst., with reference to the outbreak of foot-and-mouth on North Close Farm Kirkby Malzeard, near Ripon:

Mr. Stockman, Chief Veterinary Officer of the Board of Agriculture and Fisheries, having visited the infected farm, reports that all the available evidence goes to show that the disease exists only upon that farm. Veterinary inspectors of the Board have inspected animals on the surrounding farms, and can find no indication of any other centre of disease in the neighbourhood.

In these circumstances, the Board, acting upon the recommendation of their Chief Veterinary Officer, have decided to cause all the animals on the infected farm, numbering 25 cattle, 94 sheep, and three pigs, to be slaughtered. They have also, as a matter of precaution, ordered the slaughter of two cows recently removed from the farm to other premises in Yorkshire, which on veterinary inspection have been found not to exhibit any signs of foot-and-mouth disease.

Instructions have been given for the slaughter of all these animals to be carried out forthwith, with every

precaution against the possible risk of the spread of contagion by means of the persons employed to carry out the operations.

The origin of the oubreak has not yet been accounted for, but all possible clues are being followed up by the inspectors of the Board.

The *London Gazette* of Friday night contains an Order of the Board of Agriculture and Fisheries prohibiting the movement of cattle, sheep, goats, or swine into, out of, or within the district which is described in a schedule. The Order, the provisions of which shall be executed and enforced by the local authority, sets forth the offences of which persons who contravene the Order shall be deemed guilty.

The Department of Agriculture of Ireland issued an order on Thursday forbidding the importation to Ireland from Great Britain of cattle, sheep, goats, and other ruminating animals and swine owing to the outbreak of foot-and-mouth disease in Yorkshire.

Sir E. Strachey stated in the House of Commons on Monday that twenty-six cattle, ninety-four sheep, and three swine have been slaughtered at Northclose Farm; three cows and three calves, which had been in contact with the animals ou the farm, have been slaughteeed on other premises and found healthy. There has been no further outbreak. Full compensation on the usual scale would be paid. None of the affected animals have been exposed in a market, but, as a matter of precaution all markets (fourteen in number) within fifteen miles radius of the infected place were closed on Thursday, 21st inst.

In the House of Commons, Tuesday, July 26:

Viscount Helmsley (Yorks, Thirsk, Opp.) asked the Parliamentary Secretary to the Board of Agriculture whether he could see his way to reduce the size of the scheduled area in the North Riding of Yorks owing to the fact that all the infected animals had been slaughtered.

Sir E. Strachey (Somerset, S., Min.): I regret to say that it is not possible to reduce the area as desired by the noble lord, in view of the fact that since I came into the House a telegram has been received at the Board reporting a further outbreak of foot-and-mouth disease to-day. One stirk is infected in a field adjoining North Close Farm, where the first outbreak occurred.

Viscount Helmsley: Having regard to the serious inconvenience caused to farmers in the neighbourhood by the recent prohibition, will the hon. gentleman endeavour to diminish that area as soon as possible if he considers it safe to do so?

Sir E. Strachey: I think the noble lord will see that, in view of this further outbreak, it is impossible to do anything at present. (Cheers).

Mr. Stanier (Shropshire, Newport, Opp.): In view of the great danger to herds in this country arising from this outbreak, can the hon. baronet tell us how far the area goes outside the limits of the four infected farms?

Sir E. Strachey: There is only one infected farm. The area prohibited is the 15-mile area which in other cases has been found always effective.

The following statement was issued on Wednesday night, 27th inst., by the Board of Agriculture and Fisheries:—

In connection with the further case of foot-and-mouth disease, announced by Sir Edward Strachey, M.P., on Tuesday in the House of Commons as having been detected in a stirk grazing in a field adjacent to North Close Farm, where the disease first appeared, the diseased animal was slaughtered forthwith. The Board of Agriculture and Fisheries, after consideration of all the circumstances, have also ordered the slaughter, with compensation, of 34 cattle and 107 sheep pastured in the same field as the stirk, but healthy, in the hope that by this means the further spread of the disease may be prevented. Arrangements for the valuation and slaughter of these animals are being made with the utmost possible despatch, and in the meantime they have been as far as possible isolated from the animals in surrounding pastures.

A Reuter telegram from Buenos Aires, dated July 26, states that, in consequence of the outbreak of foot-and-mouth disease in Yorkshire, the Minister of Agriculture has issued a decree prohibing from to-day the importation of cattle, sheep, goats, and pigs from Great Britain. The prohibition also applies to forage and implements which may have been in contact with infected anima ls

NATIONAL VETERINARY ASSOCIATION.

Annual Dinner.

The annual dinner of the National Veterinary Association, which has been meeting this week in London, was held at the Hotel Cecil on Wednesday evening last, the President of the Association, Prof. Macqueen, occupying the chair. Close upon a hundred members and guests, including ladies, were present.

Sir John M'Fadyean, in proposing "The United Services," speaking for the Navy, thought that anyone who advocated a reduced Navy must be a dangerous lunatic. He believed the people of this country as a whole desired peace, but wished to be capable of dealing with all emergencies. (Hear, hear.) He paid a high tribute to the Army, and, referring to the Army Veterinary Corps, said it had been the Cinderella of the Army for many years, but thanks to the efforts of Col. Duck, Maj.-Gen. Thomson and Maj.-Gen. Smith, the conditions of service in the Corps were now greatly improved, and in knowledge of its duties in peace and war the Corps would compare favourably with the corresponding establishment in any other country. (Hear, hear.) With regard to the Territorial Forces, the old maid's motto, "Always ready, never wanted" (Laughter) was applicable to that branch of the Services. (Cheers.)

Maj.-Gen. Smith, in responding, pointed out that looking upon the Services as a form of insurance the country paid no more than 1¾ per cent. premium for the protection received. It used to be said that invasion was impossible, but that was not the view taken at the present day. The wealth of this country amounted to over 3,834 millions, and for protecting that huge amount of property Great Britain paid in respect of its Forces 66 millions only! Of the forces employed in war not all were destructive, and amongst the constructive forces was the Army Veterinary Corps. (Hear, hear). In the last war the losses amongst horses were appalling, but that could not be attributed to the faults of the Corps, and he hoped some day a full history of the losses and their causes would be published. That organisation had to take place in peace was the lesson learned during the last ten years, and considerable time and attention was now being devoted to the proper organisation of the veterinary service. The Corps, thanks largely to the work of Col. Duck and General Thomson was now properly equipped, and both officers and men better trained than ever they were. He thought the country had a right to expect from the veterinary officer in the Army greater exactitude than could be expected from the civil profession, because they were never hurried over their cases or bothered to get them off the sick list, and were given every opportunity of accumulating exact knowledge. He hoped a large number of gentlemen would come forward for the Territorial Force, the conditions being such now that the members of the

force held exactly the same rank as the officers in the regular service, and received exactly the same pay and promotion (Hear, hear), and he did not think the examinatiens would be found too severe. In conclusion he referred to a personal matter, a rumour that at the end of his term of service which was now at hand, he was to be transferred to a very important post in the Veterinary College at Camden town, and said the rumour was absolutely without foundation.

Mr. THOMAS MCROW, the Secretary of the Royal Agricultural Society, proposed the toast of "The Royal College of Veterinary Surgeons," and referred to the close alliance that had existed for many years between veterinary surgeons and the agriculturists of the country. The Royal Agricultural Society, he said, had always shown its interest in veterinary science by contributing funds for research work, and only that very day, mainly at the instigation of Sir John M'Fadyean, the Council of the Society had decided to make a further grant to the Royal Veterinary College to help in carrying out iuvestigations into certain diseases of live stock. (Hear, hear.)

Mr. W. FREEMAN BARRETT, the President of the Royal College of Veterinary Surgeons, in responding to the toast, referred to his recent election as President and expressed a desire to work harmoniously with all the members of the Council, and he thought it would be gratifying to the profession to know that every member of that body was working hand-in-hand with the view to advancing the prospects of the profession. (Hear, hear). He referred to the projected Veterinary Surgeons Amendment Bill and the opposition, which he believed was quite honest opposition to the Bill, both in the Council and outside, and declared that he would do all that he possibly could in the way of conciliation. The matter that had to be faced was that the Royal College of Veterinary Surgeons required money if the interests of the profession were to be adequately looked after. He was gratified to find that on all occasions the Royal Agricultural Society of England had offered no opposition, but there had been opposition on the part of organisations representing some of the agriculturists of the country, not all of whom had yet discovered that the trained scientific veterinary surgeon could alone help them and their interests. (Hear, hear.) It should be made quite clear that there was no desire on the part of the profession to interfere with anyone who desired to perform the minor operations of the farm ; the veterinary surgeon being only desirous of attending to the stock in disease. He thought the Bill would have to go forward without delay, subject to certain amendments which were deemed to be necessary. The matter was particularly urgent in view of the decision of Mr. Justice Neville in the High Court of Chancery, because although the Judge was with the profession in the particular case before him, he went so far as to say that a number of unscrupulous men could band themselves together in a company and call themselves veterinary surgeons. It was essential that the Council should act with the utmost rapidity and should receive the united support of the profession. (Hear, hear). He also mentioned the Bill that had passed the House of Lords in connection with the jury system, and said that steps were being taken to have a clause inserted in the Veterinary Surgeons' Amendment Bill, exempting veterinary surgeons from serving on juries. (Hear, hear).

To Mr. BARRETT also fell the duty of proposing "The National Veterinary Association." He said he remembered very well the inauguration of the Association, when some little misgivings were expressed as to its prospects. It was a very curious thing that in the veterinary profession there was always some little opposition to innovation, but fortunately that opposition rapidly dispersed itself and the atmosphere became clear again. He was pleased to find that in all the years of its existence the Association had been a prosperous and going concern. It had benefitted the profession greatly by bringing old friends together and expanding the minds of the members. He thought it was impossible to have a more popular President than Prof. Macqueen. (Cheers.) With regard to the future of the Association, if a just and equitable scheme of amalgamation could be devised he felt sure that the Council of the Royal College would welcome such a scheme, but that scheme must have some provision for the security of the funds which, at much labour, had been collected.

The PRESIDENT (Prof. Macqueen) in responding, said the Association was rather a peculiar one, hibernating, as it were, except for two days in the year, when their friend Mr. Hunting had discovered a feasting place for its members. (Laughter.) It was a sort of nomadic existence without a caravan, because the regalia and appurtenances of the Association might very well be carried in a cigar box. (Laughter.) Mark Twain was frequently found with a cigar box under his arm, and when asked for an explanation said he was moving again. (Laughter.) Arriving on the scene fixed for the meeting of the year, the Association produced a very remarkable stimulation of professional enthusiasm in the local practitioner—frequently transient—(laughter)—but it was an enthusiasm which was well marked. Of late years hospitality seemed to have become the chief feature of the annual meetings, and without it he thought the Association would not be quite so popular. It was a good thing some part of the programme was appreciated. (Laughter.) It had been suggested that the meeting should extend over a longer time, but there were several reasons why that could not be, one being that the staying power of the members was unequal to the lavish hospitality showered upon them during their visit—(laughter)—and another was the high mental attention engendered by the concentration of intellect which was required to understand some of the papers. (Laughter.) Since ladies had honoured the Association at their meetings the chastening influence of their presence had served to mollify the captious aggressiveness of some of the members, and the discussions now were much milder in character, in fact so decorous that a stranger might be pardoned for believing he was at a meeting of some religious denomination. (Laughter.) The members of the National collectively were a meek body, but there were very few individually who would turn the other cheek to the smiter ; and they did not lay up treasures on earth, not because of the danger of moth and rust, but because they had no treasures. (Laughter.) The light which was reflected from the meetings of the Association might not be always effulgent, but it had burnt without a flicker for twenty-eight years—(cheers)—and it promised to continue, perhaps with added brilliancy, for many years to come. (Cheers.) The papers bore the ring of genuine effort and honest endeavour, and served a very useful purpose. (Hear, hear.) Another point of value in connection with the Association was that at its meetings friendships were made and renewed, and sometimes ripened into affection. (Cheers.) In other cases little misunderstandings were dissipated, united effort was organised for professional weal, and the Association did all it possibly could to maintain the motto of the Royal College of Veterinary Surgeons. (Cheers.)

The toast of "Our Guests" afforded Mr. Hunting an opportunity of making a characteristic speech of welcome to the visitors. He coupled with the toast the names of Mr. Ollis, of the Department of the London County Council chiefly responsible for administering the Diseases of Animals Act, and mentioned in that connection that whereas London used to have 80 per cent. of the cases of glanders occurring in the United Kingdom it now had not quite as much as the whole of the Provinces. That he believed was due to the fact

that the administration of the Act in London was superior to its administration in the rest of the country. He also coupled with the toast the name of Dr. Murray, who had been closely connected with the veterinary profession in his work at the Cancer Research Institute.

Mr. J Ollis, in responding, said the work of stamping out glanders had been largely due to Mr. Hunting's knowledge of the disease and his energetic service on behalf of the Council.

Dr. Murray also responded, observing that he had experienced in the course of his work a great deal of kindness from the members of the veterinary profession.

Mr. P. J. Howard proposed the toast of "The Ladies," to which Capt. A. G. Todd replied.

Cattle Foods.

The Earl of Harewood asked the President of the Board of Agriculture what was the name of the cattle food which was referred to in the House on June 27 as being composed partly of sawdust ; and if it was not a fact that the product referred to was not that made entirely from sugar-cane, which was proving of so much service both to the sugar-cane grower and to the British agriculturist.

Earl Carrington said it did not fall within his province as President of the Board of Agriculture to make any comparison, or to draw any distinction, between the different forms of patented sugar foods for cattle on the market, and still less did he think he ought to make any statement which might be used either as an advertisement for, or in disparagement of, any particular manufacture. His duty was to see that the provisions of the Fertilisers and Food Stuffs Act were properly carried out. He was therefore not prepared to give the name of the cattle food to which reference was made in the House on June 27, nor did he think he ought to be asked to offer an opinion as to the value of the sugar-cane food particularly referred to in the noble lord's question.

Western Farmers and Swine Fever Orders.

An important conference representative of the different branches of the pig industry in Wilts was held at Chippenham on Monday for the purpose of formulating a scheme to bring pressure to bear on the Departmental Committee now sitting on the subject of swine fever, to make the restrictions in regard to that disease less repressive and vexatious. The Mayor of Chippenham presided over the gathering.

Mr. Portsmouth, Devizes, cited instances where veterinary surgeons had been called in to examine pigs, and though certifying them as not infected with the disease, had kept the premises closed for an unreasonable time. He considered that veterinary surgeons showed the grossest ignorance possible in regard to swine fever. They came out of college with a knowledge which was supposed to cure, but they went round only to kill. He believed that that showed great ignorance of the disease, and he wondered the professional pride of the veterinary surgeon allowed him to do it. (Laughter.)

It was unanimously resolved to appoint Mr. Portsmouth, who is a farmer in the Devizes district, to attend and give evidence before the Departmental Committee and to strongly advocate a modification of the present regulations.

A small committee was also appointed to confer with Mr. C. Bathurst, M.P., to formulate the evidence to be adduced to the Committee.

Magistrates and Veterinary Surgeons.

At Marylebone Police Court Mr. Paul Taylor had before him a similar case to that recently before Mr. Plowden, in which one veterinary surgeon declared that a horse was lame and unfit for work, while two other surgeons swore that it was sound.

"Why shouldn't veterinary surgeons differ the same as doctors," said Mr. Paul Taylor.

"And lawyers," interposed Mr. Freke Palmer, the solicitor.

"And like all of us—even magistrates," added Mr. Paul Taylor, smiling. He had no doubt, he said, that the veterinary surgeons were perfectly honest witnesses ; the fact was that it was often very difficult to determine whether a horse was lame or not.

The proceedings were dismissed.

The Traffic in Worn Out Horses.

At Thames, before Mr. Chester Jones, Thomas Clissord, fishmonger, of Eastfield Street, Limehouse, was charged with cruelty to a horse.

A police constable stated that about 5 o'clock on Sunday morning he saw the defendant driving a horse attached to a van in Ben Jonson Road, Stepney. The horse fell down, and on examination the witness found a number of large sores on the animal, which was so exhausted that it could not get up. The defendant, on being taken into custody, said, "It is my own horse and I have been taking fish to Walthamstow. I walked her there and back, and have been since I o'clock getting here. I am sorry I took her out, as I bought her for meat, to go away on the boat."

Mr. A. Wilson, veterinary surgeon, said it was cruelty to keep the animal alive, and he ordered its immediate slaughter. The case was one of the worst he had seen.

The defendant was fined £5, with £I 6s. costs, with the alternative of six weeks' hard labour.

Diseases of Animals (No. 2) Bill.

In the House of Commons on Tuesday, July 26.

The Lords' amendments to this Bill were considered and agreed to.

Personal.

Mr. W. J. Mulvey, F.R.C.V.S., has been appointed by the Lord Chancellor a Justice of the Peace for the County of London.

Holness.—On the 22nd July, at the "Cedars," Blackheath, the wife of Capt. H. J. Holness, A.V.C., of a daughter.

Tonar—Sants.—On Monday, July 11, at the Church of Corpus Christi, Tonbridge, Kent, Frederick Tonar, M.R.C.V.S., to Frances Sants, both of Bath.

ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

War Office, Whitehall, July 22.

Army Veterinary Corps.

Lieut. J. W. O'Kelly is seconded for service with the Egyptian Army. Dated July 1.

Messrs. Wyman & Sons (Ltd.) have published the following :—Diseases of Animals, No. 2, 1d. Board of Agriculture : Report under the Diseases of Animals Act for 1909, 1s.

Veterinary Societies—Addresses.

Alterations for this list must be duly notified by the Secretaries

ASSOCIATION OF VETERINARY OFFICERS OF HEALTH
Pres: Mr. J. S. Lloyd, F.R.C.V.S., Health Office, Sheffield
Hon, Sec: Mr. A. M. Trotter, M.R.C.V.S.,
Moore Street, Abattoir, Glasgow

BORDER COUNTIES V.M.S.
Pres: Mr. J. W. Hewson, M R.C.V.S., Wigton
Hon. Sec. (pro tem.): Mr. F. W. Garnett, M.R.C.V.S.,
Dalegarth, Windermere
Meetings, Second Friday of Feb., June, and October

CAPE OF GOOD HOPE V.M.S.
Pres. Mr. J. D. Borthwick, M.R.C.V.S., Cape Town
Hon. Sec. & Treas. Mr. R. W. Paine, F.R.C V.S.

CENTRAL V.S.
Pres. Mr. T. Salusbury Price, M.R.C.V.S.,
Essex Lodge, Brixton Hill, S.W.
Hon. Sec: Mr. H. A. MacCormack, M.R.C.V.S.,
122 St. George's Avenue, Tufnell Park, N.
Meetings, First Thursday in each month, except August and September, 10 Red Lion Square, Holborn, at 7 p.m

CENTRAL CANADA V.A.
Hon. Sec: Mr. A. E, James, Ottawa

CENTRAL V.A. OF IRELAND.
Pres: Mr. P. J. Howard, M.R.C.V.S., Ennis
Hon. Sec. Mr. M. J. Cleary, M R.C.V.S., Streamstown, Moate
Treas: Mr. J. F. Healey. M.R.C.V.S., Midleton

EASTERN COUNTIES V.M.A.
Pres: Mr. A. Holl, M.R.C.V.S., New Buckenham
Hon. Sec. & Treas: Mr. James Robertson, M.R.C.V.S.
Leo House, Stalham
Meetings, Second Tuesday, Feb. and July

GLASGOW V.M.S.
Pres. Principal McCall.
Hon. Sec. Mr. James Lowther

VET. MED. ASSN. OF IRELAND.
Pres: Mr. J. Holland, M R.C V.S., Athy
Hon. Sec: Mr. A. Watson, M.R.C.V.S.,
Municipal Buildings, Cork Hill, Dublin
Hon. Treas: Prof Craig, M.A., Royal Vety. Coll., Dublin.

LANCASHIRE V.M.A.
Pres: Mr. T. Eaton Jones. M.R.C.V.S., Walton, Liverpool
Hon. Treas: Mr. W. Packman. M.R.C.V.S., Bury, Lancs.
Hon. Sec. Mr. G. H. Locke, M.F.C.V.S.,
Grosvenor-street. Manchester
Meetings, 1st Thursday in April, June, Sept., & Dec.

LINCOLNSHIRE V.M.S.
Pres. Mr. T. Holmes, M.R.C.V.S., Bourne
Hon. Sec: & Treas: Mr. C. W. Townsend, F.R.C.V.S.,
Long Stanton, Cambridge
Meetings, Second Thursday Feb., June, and October

LIVERPOOL UNIVERSITY V.M.S.
Pres: Mr. W. Woods, F.R.C.V.S., Wigan
Hon. Secs: Prof. H. E. Annett, The University,
Arnold Richardson, M.R.C.V.S.,
111 Arundel Avenue, Liverpool
Meetings, May, July, October, January.

VET. ASSN. OF MANITOBA.
Pres: Dr. W. A Dunbar, Winnipeg
Hon. Sec. & Treas: Dr. F. Torrance, Winnipeg

MIDLAND COUNTIES V.M.A.
Pres: Mr. John A. Gold, M.R.C.V.S., Redditch
Hon. Sec: Mr. H. J. Dawes, F.R.C.V.S.,
Camden House. High-st., West Bromwich
Meetings, Second Tuesday. Wednesday, Thursday, and Friday alternately in Feb., May, Aug. and Nov

NATAL VETERINARY MEDICAL ASSOCIATION.
Pres. Mr. H. Watkins Pitchford, Govt. Bacteriologist,
Pietermaritzburg
Hon. Sec. & Treas. Mr. J. B. Collyer,
Vety. Inspector Natal Police, Pietermaritzburg

NATIONAL VET. ASSOCIATION.
Pres: Prof. James Macqueen, F.R.C.V.S. London, N.W.
Sec: Mr. William Hunting, F.R.C.V.S. London, S.W.
Treas: Mr. J. F. Simpson, F.R.C.V.S., Maidenhead

NATIONAL VETERINARY BENEVOLENT & MUTUAL DEFENCE SOCIETY.
Pres: Mr. W. A. Taylor, F.R.C.V.S., Brick-st, Manchester
Treas: Mr. J. B. Wolstenholme, F.R.C.V.S.,
Quay-street, Manchester
Hon. Sec: Mr. G. H. Locke, M.R.C.V.S.
Grosvenor Street, Oxford-st., Manchester

NORTH OF ENGLAND V.M.A.
Pres: Mr. E. R. Gibson, M.R.C.V.S.
25 Marlborough-street, Seaham Harbour
Hon. Sec: T. T. Jack, M.R.C.V.S., 3 Elmwood Ter, Sunderland
Meetings, Third Friday, Feb., May, Aug. and Nov.

NORTH OF IRELAND V.M.A.
Pres: Mr. F. W. Emery, F.R.C.V.S., Belfast
Hon. Sec; Mr. J. S. A. Jordan, M.R.C.V.S., Belfast
Hon. Treas; Mr. J. A. Thompson, F.R.C.V.S., Lurgan

NORTH OF SCOTLAND V.M.S.
Pres: Mr. W. Skinner, M.R.C.V.S., Old Meldrum
Hon. Sec. & Treas: Mr. G. Howie, M.R.C.V.S. Alford, Aberdeen
Meetings, Last Saturday in January and August

NORTH WALES V.M.A.
Pres: Mr. R. S. Rowlands, M.R.C.V.S., Abergele
Hon. Sec. Mr. L. W. Wynn Lloyd, M.R,C.V.S., Carnarvon
Hon. Treas. Mr. R. Jones, M.R.C.V.S., Towyn, Merionethshire
Meetings, First Tuesday, March and September

ONTARIO V.A.
Pres: Mr. J. H. Tennent, V.S., London, Ontario
Sec: & Treas: Mr. C. H. Sweetapple, V.S., Toronto, Ontario

PROVINCE OF QUEBEC V.M.A.
Hon. Sec: Mr. Gustave Boyer, Rigand. P.Q.

ROYAL COUNTIES V.M.A.
Pres: Mr. P. J. Simpson, F.R.C.V.S.,
Strathmore House, Maidenhead
Hon. Sec. & Treas: Mr. G. P. Male, M.R.C.V.S.,
250 King's Road, Reading
Meetings, Last Friday, Jan., April, July and Nov.

ROYAL SCOTTISH V.S.
Pres: Mr. Reid, M.R.C.V.S., Auchtermuchty.
Hon. Sec:

ROYAL VETERINARY COLLEGE M.A.
Pres: Dr. Lander, D.Sc.
Hon. Sec: Mr. A. L. Sheather, M.R.C.V.S.
Assist. H.S. Mr. V. Pride Jones.

SCOTTISH METROPOLITAN V.M.S.
Pres: Mr. O. Charnock Bradley, M.D., D.SC., M.R.C.V.S.,
Royal Dick Vet. College
Hon. Sec: Mr. A. Gofton, M.R.C.V.S., Ryl. Dick Vet. Coll.

SOUTHERN COUNTIES V.S.
Pres: Mr. W. Burt, Junr., F.R.C.V.S., Brighton
Hon. Sec: Mr. J. Alex. Todd, M.R.C.V.S., Worthing
Hon. Treas: Mr. E. W. Baker, M.R.C.V.S., Wimborne
Meetings, Last Thursday, Mar., June and Sept.

SOUTH DURHAM AND NORTH YORKSHIRE V.M.A.
Pres.: Mr. P. Snaith, M.R.C.V.S., Bishop Auckland.
Hon. Sec: Mr. W. Awde, F.R.C.V.S., Stockton-on-Tees.
Meetings, First Friday, Mar., June, Sept. and Dec.

TRANSVAAL V.M.A.
Pres: Mr. J. K. Pilkington, M.R.C.V.S., Johannesburg
Hon. Treas; Mr. J. M. Christy, M.R.C.V.S., D.V.S. Krugersdorp
Hon. Sec: Mr. J. G. Bush, M.R.C.V.S., Piet Retief, Transvaal

WESTERN COUNTIES V.M.A.
Pres: Mr. A. J. Down, M R.C.V.S., Sampford Peveril
Hon. Sec. Mr. W. Ascott, M.R.C.V.S., Bideford
Hon. Treas: Mr. P. G. Bond, M.R.C.V.S., Plymouth
Meetings, Third Thursday, March, July and November

WEST OF SCOTLAND V.M.A.
Pres: Mr. Hugh Begg, M.R.C.V.S., East Kilbride
Hon. Sec: & Treasr: Jas. Macfarlane, M.R.C.V.S.,
75 West Nile Street, Glasgow
Meetings, Second Wednesday, May, Oct. and January.

YORKSHIRE VET. ASSOCIATION
Pres: Mr. H. G. Bowes, F.R.C.V.S., 106 Clarendon-rd, Leeds
Hon. Sec; Mr. J. Clarkson, M.R.C.V.S., Garforth, nr. Leeds
Hon. Treas: Mr. A. McCarmick, M.R.C.V.S.,
Kirkstall-road, Leeds